Abstract

It is possible to produce a decoded image with a high image quality from data of the lowermost hierarchy obtained during hierarchical coding operation. An image of a first hierarchy equal to

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an original image is successively thinned in thinning units so that an image of a second hierarchy and an image of a third hierarchy are formed. Then, in an optimum correction data calculating unit, the image of the second hierarchy is corrected, a prediction value of the image of the first hierarchy is predicted from the resultant correction

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data, and correction data of the image of the second hierarchy is generated to reduce a prediction error of the prediction value lower than a preselected threshold. In another optimum correction data calculating unit, correction data of the image of the third hierarchy is similarly obtained.